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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/321,594	05/28/1999	ALAN J. DEMERS	50277-313	6698

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EXAMINER

ROMERO, ALMARI DEL CARMEN

ART UNIT	PAPER NUMBER
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2176

DATE MAILED: 02/27/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/321,594

Applicant(s)

DEMERS ET AL.

Examiner

Almari Romero

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 December 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) 12 and 13 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. This action is responsive to communications: Amendment filed on 12/02/02.
2. The rejection of Claims 1-10 under 35 U.S.C. 103(a) as being unpatentable over Goldring and Suzuki et al. as been withdrawn in light of newly found art.
3. Claims 1-13 are pending in the case. Claims 11-13 have been added. Claims 1, 9, 11, and 12 are independent claims.

Election/Restrictions

4. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-11, drawn to updating changes from a first copy of table or data container at a first site to the second copy of table or data container of the second site, classified in class 715, subclass 509.
 - II. Claims 12-13, drawn to defining a top flavor at a master site that describes superset of database objects and defining another flavor at client sites that describes subset of database objects, classified in class 707, subclass 100.
5. The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, invention II has separate utility such as to defining a top flavor at a master site that describes superset of database objects and defining another flavor at

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client sites that describes subset of database objects to propagate changes to the database objects.

See MPEP § 806.05(d).

6. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, and because the search required for Group I and Group II are separate, restriction for examination purposes as indicated is proper.

7. Newly submitted claims 12-13 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: Claims 12-13 are drawn to a method for propagating changes to database objects by defining a top flavor at a master site that describes superset of database objects and defining another flavor at client sites that describes subset of database objects.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 12-13 withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. **Claims 1-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zollinger et al. (USPN 5,999,947 – filed on 05/1997).**

Regarding independent claim 1, Zollinger et al. (Zollinger) discloses:

A method of propagating changes to a table (on col. 3, lines 1-10: teaches sending table differences to another table) comprising the steps of:

maintaining a first copy of the table at a first site (on col. 3, lines 1-67: teaches copy of a database table at client);

maintaining a second copy of the table at a second site (on col. 3, lines 1-67: teaches copy of a database table at server); and

transmitting changes of the first copy of the table from the first site to the second site (on col. 3, lines 1-67: teaches sending database table differences from copy of the database table at the server to the copy of the database table at client for synchronizing tables);

updating the second copy of the table at the second site based on the transmitted changes (on col. 3, lines 1-67: teaches updating copy of database tables from server to client based on database table differences);

wherein the first copy of the table and the second copy of the table have at least one non-overlapping relational database column (on col. 5, lines 64-66, col. 6, lines 3-25, and col. 10, line 40 – col. 11, line 32: teaches updating database table from server to client by adding a column (database table difference) to the database table of the client, wherein the column in the database table is in a relational database environment).

However, Zollinger does not explicitly disclose “non-overlapping column”.

Zollinger on col. 6, lines 19-25 and col. 10, line 40 – col. 11, line 32: teaches an entire column can be added to a database table changing the structure of the database table.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have incorporated adding an entire column to a database table which will change the structure of the database table of Zollinger replacing non-overlapping column in a table in order to efficiently handle the updating process of small database table.

Regarding dependent claim 2, Zollinger discloses:

wherein the non-overlapping relational database column is present in the first copy and missing in the second copy (on col. 6, lines 19-25 and col. 10, line 40 – col. 11, line 32: teaches an entire column can be added or deleted (missing) to a database table changing the structure of the database table; the copy of the database table at client can be missing a column and such updating process is needed to synchronize the database table with the copy of the database table at server having the missing column).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have incorporated adding an entire column to a database table which will change the structure of the database table of Zollinger replacing non-overlapping column in a table in order to efficiently handle the updating process of small database table.

Regarding dependent claim 3, Zollinger discloses:

wherein the non-overlapping relational database column is missing in the first copy and present in the second copy (on col. 6, lines 19-25 and col. 10, line 40 – col. 11, line 32: teaches an entire column can be added or deleted (missing) to a database table changing the structure of

the database table; updates as part of synchronizing the database differences of a client and server copy database tables).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have incorporated adding an entire column to a database table which will change the structure of the database table of Zollinger replacing non-overlapping column in a table in order to efficiently handle the updating process of small database table.

Regarding dependent claim 4, Zollinger discloses:

comprising the step of reconciling differences in the column shape of the first copy and the column shape of the second copy for the transmitted changes (on col. 3, lines 1-43 and col. 10, line 40 – col. 11, line 32: teaches sending database table differences and updating the copy of the database table at client by adding a column which will change the structure of database table).

Regarding dependent claim 5, Zollinger discloses:

comprising the step of defining a top flavor describing overlapping relational database columns and non-overlapping relation database columns of the table (on col. 6, lines 3-40: teaches supersets or collections (flavor) of the updates which may include updating a database table by adding or deleting columns of a database table).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have incorporated adding an entire column to a database table which will change the structure of the database table of Zollinger replacing non-overlapping column in a table in order to efficiently handle the updating process of small database table.

Regarding dependent claim 6, Zollinger discloses:

comprising the steps of: defining a first flavor describing the columns of the first copy; and transmitting an indicator of the first flavor from the first site to the second site (on col. 6, lines 3-40: teaches supersets or collections (flavor) of the updates of the database tables).

Regarding dependent claim 7, Zollinger discloses:

comprising the steps of: defining a second flavor describing the columns of the second copy and wherein the step of updating the second copy of the table at the second site based on the transmitted changes includes the step of updating columns between the first flavor and the second flavor in the second copy of the table (on col. 6, lines 3-40: teaches supersets or collections (including second flavor) of the updates of the database tables based on the differences of two separate database tables).

Regarding dependent claim 8, Zollinger discloses:

the step of maintaining a first copy of the table at a first site includes the step of maintaining an updatable snapshot at a laptop computer site and the step of maintaining a second copy of the table at the second site includes the step of maintaining a master table at a master site (on col. 6, lines 19-40: teaches changes of a database table can be determined by a database table that has been “frozen” so that differences may be measured; on col. 7, lines 28-37: teaches laptop computer)

Regarding independent claim 9, Zollinger discloses:

A method of modifying a table to drop a first column and add a second column, said table being replicated at a plurality of sites (on col. 6, lines 19-25 and col. 10, line 40 – col. 11, line 32: teaches columns or records in a database table can be added and deleted and updating these

changes of the addition and deletion to another copy of the database table), comprising the steps of:

- (a) defining a first flavor for a first site, said first flavor describing the table as having both the first column and the second column (on col. 3, lines 1-67: teaches copy of a database tables at client or server and on col. 6, lines 19-40: teaches updates of database tables may be supersets or collections (flavors) of other updates);
- (b) adding the second column to the table at the first site, so that the table contains both the first column and the second column (on col. 6, lines 19-25 and col. 10, line 40 – col. 11, line 32: teaches adding column to a database table);
- (c) defining a second flavor for a second site, said second flavor describing the table as having the second column but not the first column (on col. 3, lines 1-67: teaches copy of a database tables at the client or server, in which the columns of the client's or server's database table may not have the current updated column and on col. 6, lines 19-40: teaches updates of database tables may be supersets or collections (flavors) of other updates);
- (d) dropping the first column and adding the second column to the table at the second site (on col. 6, lines 19-25 and col. 10, line 40 – col. 11, line 32: teaches columns can be added and records in a database table can be deleted and updating these changes of the addition and deletion to another copy of the database table);
- (e) defining the second flavor for the first site and dropping the first column from the table at the first site (on col. 6, lines 19-40 and col. 10, line 40 – col. 11, line 32: teaches deletion of records from a database table); and

(f) maintaining replication activities while performing steps (a), (b), (c), (d), and (e) (on col. 3, lines 1-67: teaches synchronization process between two database table at the client and at the server).

However, Zollinger does not explicitly disclose “dropping the first column”.

Zollinger on col. 6, lines 19-25 and col. 10, line 40 – col. 11, line 32: teaches changing the state of a database, such as additions, deletions, or modification of records and which changes may include adding an extra field or column to a database table, in other words, if changes such as deleting records or adding columns to a database table is done, deletion of a column containing such records can also be done.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have incorporated deletions of records in a database in which records can be in columns in a database table of Zollinger replacing dropping a column which is desirable and not limited for allowing distribution of changes to various client copies of database table so that the client copies may be current with the original.

Regarding dependent claim 10, Zollinger discloses:

transmitting changes to the table from the first site to the second site; and updating the second copy of the table at the second site based on overlapping columns between the first flavor and the second flavor (on col. 3, lines 1-43 and col. 10, line 40 – col. 11, line 32: teaches sending database table differences and updating the copy of the database table at client changing the structure of database table).

Regarding independent claim 11, Zollinger discloses:

A method of propagating changes to a data container (on col. 3, lines 1-10: teaches sending table differences to another table), comprising the steps of:

maintaining a first copy of the data container at a first site; (on col. 3, lines 1-67: teaches copy of a database table at client);

maintaining a second copy of the data container at a second site (on col. 3, lines 1-67: teaches copy of a database table at server); and

transmitting changes to the first copy of the data container from the first site to the second site (on col. 3, lines 1-67: teaches sending database table differences from copy of the database table at the server to the copy of the database table at client for synchronizing tables);

updating the second copy of the data container at the second site based on the transmitted changes (on col. 3, lines 1-67: teaches updating copy of database tables from server to client based on database table differences);

wherein the first copy of the data container and the second copy of the data container have at least one non-overlapping data field (on col. 5, lines 64-66, col. 6, lines 3-25, and col. 10, line 40 – col. 11, line 32: teaches updating database table from server to client by the addition of an extra field or column (database table difference) to the database table of the client).

However, Zollinger does not explicitly disclose “non-overlapping data field”.

Zollinger on col. 6, lines 19-25 and col. 10, line 40 – col. 11, line 32: teaches an extra field or column can be added to a database table changing the structure of the database table.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have incorporated adding field or column to a database table which will

change the structure of the database table of Zollinger replacing non-overlapping field in a table in order to efficiently handle the updating process of small database table.

Response to Arguments

10. Regarding Applicant's arguments filed on 12/02/02 are moot in view of the new ground(s) of rejection as necessitated by amendment.

Regarding Applicant's remarks on pages 6-8:

Referring to independent claim 1, Zollinger discloses on col. 6, lines 3-25 and col. 10, line 40 – col. 11, line 32: teaches relational database; an entire column can be added to a database table changing the structure of the database table. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have incorporated adding an entire column to a database table which will change the structure of the database table of Zollinger replacing non-overlapping column in a table in order to efficiently handle the updating process of small database table.

Referring to independent claim 9, Examiner agrees with Applicant remarks of Susuki et al. cannot be properly combined with Goldring. The rejection of Goldring and Suzuki et al. as being unpatentable under 35 U.S.C. 103(a) as been withdrawn in light of newly found art. Zollinger discloses the claimed invention of claim 9 as described *supra*.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

USPN 6,330,568 B1 - Boothby et al. – filed on 11/1997

USPN 6,405,218 B1 – Boothby – filed 10/1998

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Almari Romero whose telephone number is (703) 305-5945. The examiner can normally be reached on Mondays - Thursdays (7:30am - 6:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Heather Herndon can be reached on (703) 308-5186. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-7239 for regular communications and (703) 746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

AR
February 21, 2003


HEATHER R. HERNDON
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